

REMARKS

Applicant adds new claims 17-20; therefore, Claims 1-20 are pending in this application.

The Examiner rejects:

- claims 1-5, 7, 9-13 and 15 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. 5,115,132 to Saotome et al. (Saotome '132) in view of JP 11-38533A to Arakawa (Arakawa);
- claims 6 and 14 under 35 U.S.C. § 103(a) as being unpatentable over Saotome '132 and Arakawa in view of U.S. Pat. 4,814,616 to Saotome et al. (Saotome '616); and
- claims 8 and 16 under 35 U.S.C. § 103(a) as being unpatentable over Saotome '132 and Arakawa in view of Saotome '616 and further in view of Ohyama et al. (Ohyama).

Applicant respectfully traverses the Examiner's rejections as follows.

Saotome '132 relates to recording along a belt where x-ray exposure is provided to one side of the belt and image reading and erasure is provided by conveying the belt to a read-out section, and erasure is further achieved by conveyance of the belt (see Id., Figs. 1 and 10).

On the other hand, Arakawa discloses an apparatus, for acquiring image information for energy subtraction processing, which includes radiation source 10 for radiating object 50, and stimuable phosphor sheet 20 for receiving radiation which passed through object 50. Multiple exposures are made of high and low energy radiation to front 21 and back 22 panels of stimuable phosphor sheet 20, which also includes an energy separator 23 between the panels 21 and 22. While Arakawa makes a passing mention of a stimuable phosphor sheet which comprises a transparent substrate and a single stimuable phosphor sheet (see Id., col. 11, line 57

AMENDMENT UNDER 37 C.F.R. § 1.111
Appln. No.: 09/943,355

through col. 12, line 2), the read out operation for such an arrangement is not taught or suggested, and is not a central aspect to the Arakawa disclosure.

Applicant respectfully submits that one skilled in the art would not have been motivated to combine the teachings of Saotome '132 and Arakawa. In particular, Arakawa relies on obtaining images based on a difference in energy levels and employs EL panel 30 for the purpose of accentuating this difference (see Arakawa, col. 9, lines 44-54). That is, EL panel 30 emits erasing light sufficient only to erase the high energy information S_h to a certain extent. This is not conducive to the belt arrangement of Saotome where image erasing (i.e., complete, residual image erasing) is carried out in the course of rewinding of stimilable phosphor sheet (see Id., col. 16, line 27 through col. 17, line 46).

Applicant submits that the role of the erasing light source as defined in Applicant's claimed invention is totally different from that of the EL panel 30 of Arakawa. That is, the erasing light source in accordance with Applicant's claimed invention is arranged to release the entire energy stored on the stimulable phosphor sheet after the image signal has been obtained from the stimulable phosphor sheet, so that the stimulable phosphor sheet may be reused. On the other hand, the EL panel 30 of Arakawa is used to release only the high energy image information stored in a part (i.e. a layer 21) of the stimulable phosphor sheet before the image signal is read out. The EL panel 30 of Arakawa does not play a role of releasing the entire energy, and is incapable of rendering the stimulable phosphor sheet reusable. (See, for example, column 9, lines 44-54 of Arakawa.)

AMENDMENT UNDER 37 C.F.R. § 1.111
Appln. No.: 09/943,355

Applicant further submits that secondary references of Saotome '616 and Ohyama do not make up for the above-noted deficiencies of the primary combination of Saotome '132 and Arakawa.

Therefore, independent claims 1 and 9 are patentable for at least these reasons, and the remaining claims 2-8 and 10-16 are patentable at least based on their dependency.

Furthermore, Applicant's dependent claims 7 and 15 are distinguishable over the prior art at least for the following additional reasons. With the structure in which the stimuable phosphor sheet is kept stationary in the fixed position, the operation of recording, reading and erasing can all be carried out without moving either of the stimuable phosphor sheet and the erasing light source. This renders the entire structure of the apparatus quite simple and compact. In addition, operation cycle time of the apparatus can be shortened. In Arakawa, the stimuable phosphor sheet is assumed to be forwarded to other positions for the reading and erasing operations, since the EL panel 30 cannot play a role of total erasing as mentioned above. In Saotome, either of the stimuable phosphor sheet (Figure 10) and the erasing light source (Figure 9A) is moved for the erasing operation. Therefore, no matter how the teachings of Arakawa and Saotome are combined, the simple and compact structure which may be achieved by advantageous (non-limiting) implementations of the embodiments of the Applicant's claimed invention cannot be derived from any reasonable combination of the cited prior art references.

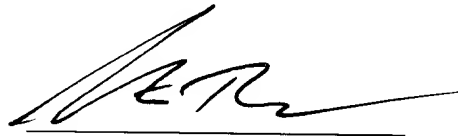
Finally, Applicant adds claims 17-20 to describe more particularly some of the preferred embodiments of the invention, and corrects a minor typographical error in the specification.

AMENDMENT UNDER 37 C.F.R. § 1.111
Appln. No.: 09/943,355

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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